

or alternatively, irradiating a plurality of component gases of a deposit film onto the substrate surface to cause reaction thereof, thereby depositing a thin film on the substrate surface;

wherein two or more gases to be irradiated simultaneously are fed after converting same into clusters.

12.(Amended) A method for forming a thin film, which comprises the steps of forming a cluster which is an annular group of atoms or molecules of a reactive substance gaseous at room temperature, irradiating cluster ions ionized therefrom onto a substrate surface, and at the same time or alternatively, irradiating a plurality of component gases of a deposit film onto the substrate surface to cause reaction thereof, thereby depositing a thin film on the substrate surface; wherein at least one of the gaseous reactive substances to be converted into cluster is an oxygen-containing substance.

14.(Twice Amended) A method for forming a thin film as claimed in claim 11, which comprises the steps of irradiating oxygen gas cluster ions onto the substrate, and at the same time, or alternately, irradiating plurality of, component gas of a deposit film onto the substrate surface to cause reaction of both, thereby depositing a thin ferroelectric film on the substrate surface.